

8 **x** **8**
SOURCES DISPLAYS

Crosspoint Matrix for HDMI

EXT-HDFST-848CPN

User Manual

Release A3



Important Safety Instructions

GENERAL SAFETY INFORMATION

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this product near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install or place this product near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. To reduce the risk of electric shock and/or damage to this product, never handle or touch this unit or power cord if your hands are wet or damp. Do not expose this product to rain or moisture.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. Batteries that may be included with this product and/or accessories should never be exposed to open flame or excessive heat. Always dispose of used batteries according to the instructions.

RACK MOUNT SAFETY INFORMATION

- a. Maximum recommended ambient temperature: 40 °C (104 °F).
- b. Increase the air flow as needed to maintain the recommended temperature inside the rack.
- c. Do not exceed maximum weight loads for the rack. Install heavier equipment in the lower part of the rack to maintain stability.

Warranty Information

Gefen warrants the equipment it manufactures to be free from defects in material and workmanship.

If equipment fails because of such defects and Gefen is notified within two (2) years from the date of shipment, Gefen will, at its option, repair or replace the equipment, provided that the equipment has not been subjected to mechanical, electrical, or other abuse or modifications. Equipment that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for ninety (90) days from the day of reshipment to the Buyer.

This warranty is in lieu of all other warranties expressed or implied, including without limitation, any implied warranty or merchantability or fitness for any particular purpose, all of which are expressly disclaimed.

1. Proof of sale may be required in order to claim warranty.
2. Customers outside the US are responsible for shipping charges to and from Gefen.
3. Copper cables are limited to a 30 day warranty and cables must be in their original condition.

The information in this manual has been carefully checked and is believed to be accurate. However, Gefen assumes no responsibility for any inaccuracies that may be contained in this manual. In no event will Gefen be liable for direct, indirect, special, incidental, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. The technical information contained herein regarding the features and specifications is subject to change without notice.

For the latest warranty coverage information, refer to the Warranty and Return Policy under the Support section of the Gefen Web site at www.gefen.com.

PRODUCT REGISTRATION

Please register your product online by visiting the Register Product page under the Support section of the Gefen Web site.

Contacting Gefen Technical Support

Gefen, LLC
c/o Customer Service
20600 Nordhoff St.
Chatsworth, CA 91311

Telephone: (818) 772-9100
(800) 545-6900

Fax: (818) 772-9120

Email: support@gefen.com

Visit us on the Web: www.gefen.com

Technical Support Hours: 8:00 AM to 5:00 PM Monday - Friday, Pacific Time

8x8 Crosspoint Matrix for HDMI is a trademark of Gefen, LLC.

Important Notice

Gefen, LLC reserves the right to make changes in the hardware, packaging, and any accompanying documentation without prior written notice.

HDMI, the HDMI logo, and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing in the United States and other countries.

Operating Notes

- There is no internal scaling in the Gefen 8x8 Crosspoint Matrix for HDMI. All of the attached monitors must be able to display the resolutions output by the source devices. For maximum compatibility it is recommended that only one compatible / common resolution be used by all of the source devices.
- The Gefen 8x8 Crosspoint Matrix for HDMI is a full-featured crosspoint matrix for eight inputs and eight outputs. Any source can be connected to any display at any time, using the remote control, RS-232, Telnet, or by controlling it via the buttons on the front panel.
- 3D content pass-thru is enabled to all outputs when a 3DTV is connected to Output A. Ensure to power cycle the Matrix once a 3DTV is connected to Output A during standard operation.

Features and Packing List

Features

- Supported HDMI features:
 - ▶ Resolutions up to 1080p Full HD and 1920 x 1200 (WUXGA)
 - ▶ 12-bit Deep Color
 - ▶ LPCM 7.1 audio, Dolby® TrueHD, Dolby Digital® Plus, and DTS-HD® Master Audio™
 - ▶ 3DTV pass-through
 - ▶ Lip Sync pass-through
 - ▶ HDCP-compliant
- Independently routes any eight Hi-Def sources to any of eight HDTV displays
- Gefen FST speeds up the HDCP authentication process
- Fast and Slow FST switch
- Advanced EDID Management for rapid integration of sources and displays
- Ability to save and recall presets
- Supports DVI sources and displays using HDMI to DVI adapters or cables
- Field-upgradeable firmware via IP
- Front-Panel Switching capability
- IR Remote Control via front panel sensor and back panel input (using EXT-RMT-EXTIR)
- Serial (RS-232) control for automation
- IP Control via Web Server and Telnet
- Rack mountable
- USB port for service only
- HDCP compliant



Packing List

The *8x8 Crosspoint Matrix for HDMI* ships with the items listed below. If any of these items are not present in your box when you first open it, immediately contact your dealer or Gefen.

- 1 x 8x8 Crosspoint Matrix for HDMI
- 1 x IR remote control unit
- 1 x 24V DC power supply
- 1 x AC power cord
- 1 x Quick-Start Guide

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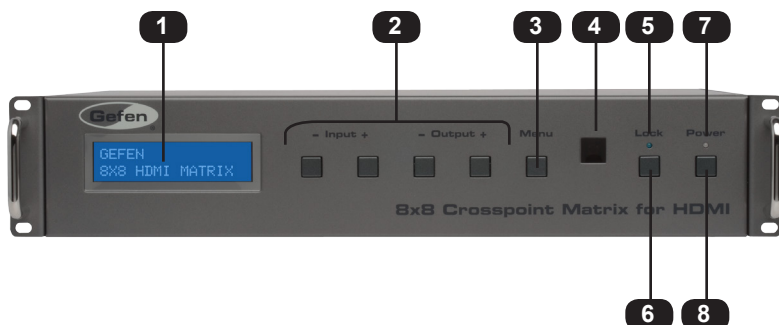
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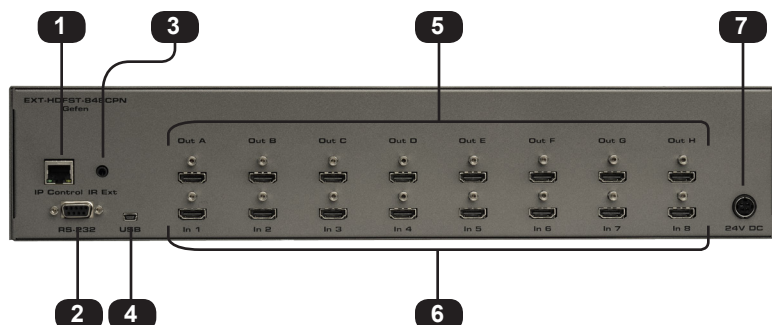
Panel Layout

Front Panel



ID	Name	Description
1	LCD display	Provides feedback of matrix features during operation.
2	Input / Output buttons	Used for routing an Input to an Output. Each of these buttons represents an Output. See Routing Basics for more information on routing sources.
3	Menu	Used to display other matrix settings, such as FST mode and displaying the IP address of the matrix. See Front Panel Buttons for more information on using the Menu button.
4	IR sensor	Receives signals from the included IR remote control unit.
5	Lock LED	This LED indicator will glow bright blue when the matrix is locked. See Locking the Matrix for more information.
6	Lock button	Press this button to lock the matrix. See Locking the Matrix for more information.
7	Power LED	This LED indicator will glow bright blue when the matrix is powered ON. When the matrix is in standby mode, the LED will glow bright red.
8	Power	Press this button to power-ON or Power-OFF the matrix.

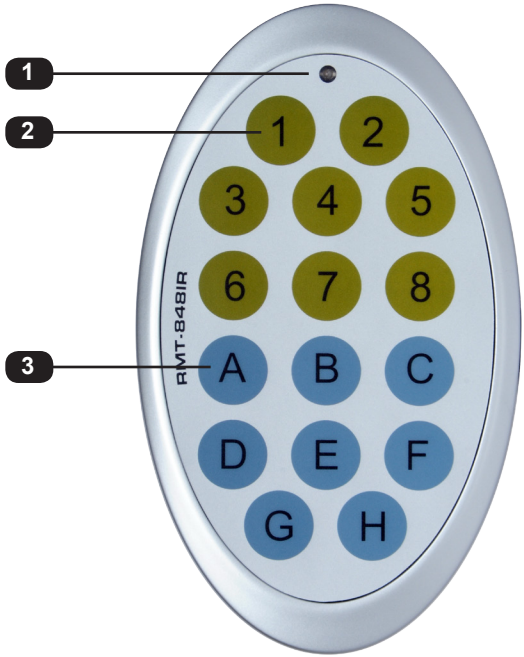
Back Panel



ID	Name	Description
1	IP Control	Connect an Ethernet cable between this jack and a LAN to use IP control. See IP / UDP Configuration for more information on using IP control.
2	RS-232	Connect the included RS-232 cable from this port to an RS-232 device. See RS-232 and IP Configuration for more information on RS-232 settings.
3	IR Ext	Connect an IR Extender (Gefen part no. EXT-RMT-IREXT) to this jack.
4	USB	Two internal power supplies are included with the matrix. Only one power supply is required to power the matrix. The second power supply is used for redundancy.
5	Out (A - H)	Use HDMI cables to connect up to eight HDTV displays (or other sink devices) to these ports.
6	In (1 - 8)	Connect up to eight Hi-Def sources to these ports using HDMI cables.
7	24V DC	Connect the included power supply to this receptacle.

IR Remote Control Unit

Front



ID	Name	Description
1	Activity indicator	This LED glows bright orange when a key is pressed on the remote.
2	Buttons (1 - 8)	Used to select the desired input when routing.
3	Buttons (A - H)	Used to select the desired output when routing.

Back
(shown with cover removed)



ID	Name	Description
1	DIP switch bank	Use these DIP switches to set the IR channel of the remote. See Setting the IR Channel for more information.
2	Primary battery slot (shown without battery)	Holds the battery for operating the remote. Use only 3V CR2032-type batteries. Make sure that the positive (+) side of the battery is facing up.
3	Alternate battery slot	Allows for the installation of secondary (backup) battery.

Installing the Battery

The IR remote control unit ships with two batteries. Only one battery is required for operation. The second battery is a spare. Use only 3V CR2032-type batteries.

1. Remove the back cover the IR Remote Control unit.
2. Insert the included battery into the primary battery slot. The positive (+) side of the battery should be facing up.
3. Replace the back cover.



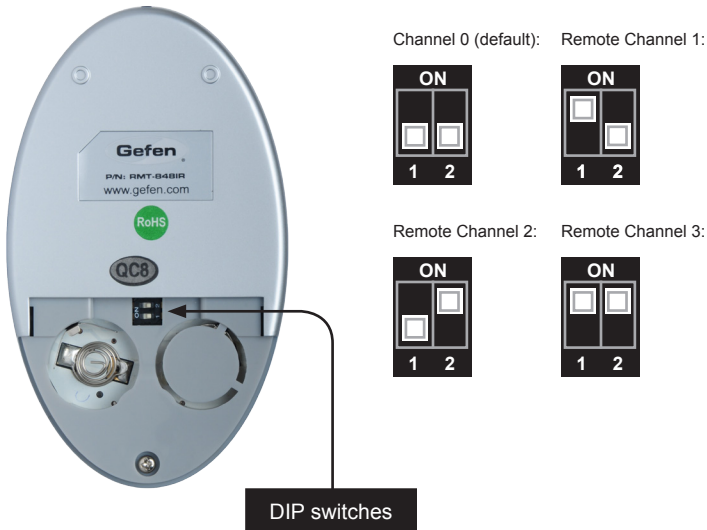
WARNING: Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.



NOTE: If the Activity Indicator, on the IR remote control unit, flashes quickly while holding down any one of the buttons, then this indicates a low battery. Replace the battery as soon as possible.

Setting the IR Channel

In order for the included IR remote control to communicate with the 8x8 Crosspoint Matrix for HDMI, the IR remote control must be set to the same channel as the matrix. See the `#rmtiradd` command for instructions on setting the IR channel of the matrix.

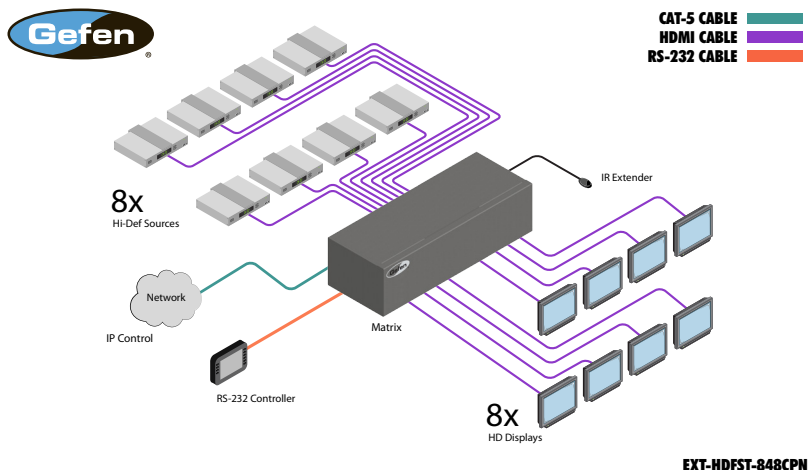


Installation

Connecting the 8x8 Crosspoint Matrix for HDMI

1. Connect up to eight Hi-Def sources to the HDMI inputs (see page 4) on the 8x8 Crosspoint Matrix for HDMI using HDMI cables.
2. Connect up to eight HDTV displays to the HDMI outputs (see page 4) on the 8x8 Crosspoint Matrix for HDMI.
3. Connect the included 24V DC power supply to the power receptacle on the Matrix.
4. To control the matrix using an RS-232 device, connect a DB-9 cable between the RS-232 controller and the RS-232 port on the matrix. See [RS-232 and IP Configuration](#) for more information on RS-232 settings.
5. To control the matrix using Telnet, UDP, or the built-in Web interface, connect an Ethernet cable from the RJ-45 jack on the matrix to the computer or LAN. See [IP / UDP Configuration](#) for more information on using IP control.
6. Connect the AC power cord to the power supply and connect the power cord to an available electrical outlet.

Sample Wiring Diagram



WARNING: The power supply should always be connected to a grounded electrical AC outlet.



Crosspoint Matrix for HDMI

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Front Panel Controls

Powering the Matrix

- Once the included power supply is connected between the matrix and an available electrical AC outlet, the Power LED on the front panel will glow bright red.



- To power-ON the matrix, press the Power button on the front panel. The Power LED will glow bright blue to indicate that the matrix has been turned ON. When the matrix is first powered-ON, the LCD will display the following information:



- After a few moments, the matrix will display the *routing status screen*. This screen indicates that the matrix is ready for operation.



Front Panel LCD Screen

The front-panel of the 8x8 Crosspoint Matrix for HDMI contains a 16-character 2-line LCD display which is used to provide feedback when performing routing functions. In addition, this display is used to show the current routing status of the matrix.



Besides displaying routing information and other feedback during various operations, the matrix provides setting information (shown below), from the routing status screen. To display other matrix settings, consecutively press the **Menu** button.

LCD Screen	Description
	FST mode screen. Displays the current FST switching mode (Fast or Slow) of each input. See Fast Switching Technology for information on using FST.
	IP address screen. Displays the current IP address of the matrix. See IP / UDP Configuration for more information on using IP control.
	Routing status screen. Displays the current routing status of the matrix. This is the default screen. See Routing Basics for information on routing sources.

Front Panel Buttons

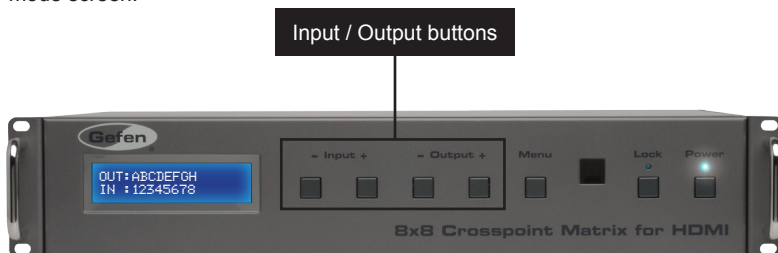
Menu button

As described on the previous page, consecutively pressing the **Menu** button provides a way to cycle through other matrix settings. Of the three screens that can be displayed (routing status, FST mode, and IP address), only the IP address screen *cannot* be changed using the front panel buttons.



Input and Output buttons

The Input and Output buttons are used to change the numbers in the bottom row of characters in the front-panel LCD. This applies to both the routing status screen and the FST mode screen.



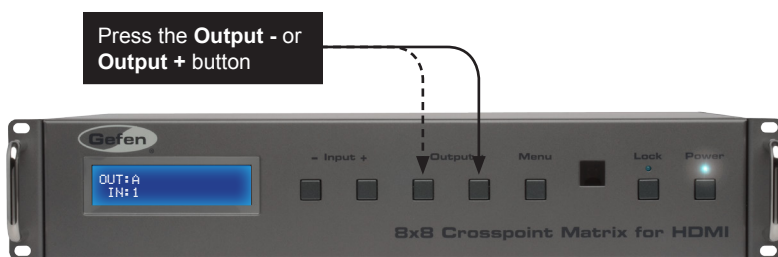
Together, the Menu, Input, and Output buttons provide all the controls necessary to control routing and FST modes on the matrix.

Routing Basics

Routing Inputs to Outputs

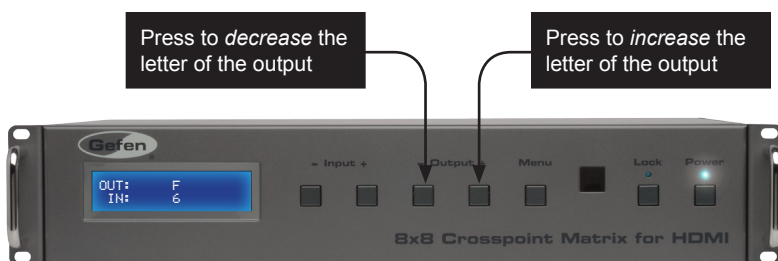
The following example illustrates the routing process. An input may be routed to a single or multiple outputs. Multiple inputs cannot be routed to a single output.

1. Select the desired output by pressing the **Output -** or **Output +** button. The routing state for Output A will be displayed in the LCD.



OUT: A
IN: 1

2. Press the **Output -** or **Output +** button again to cycle through the routing state for each output.

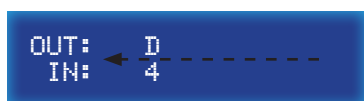


Pressing the **Output +** button will cycle through each output, from left to right:

OUT: F
IN: 6

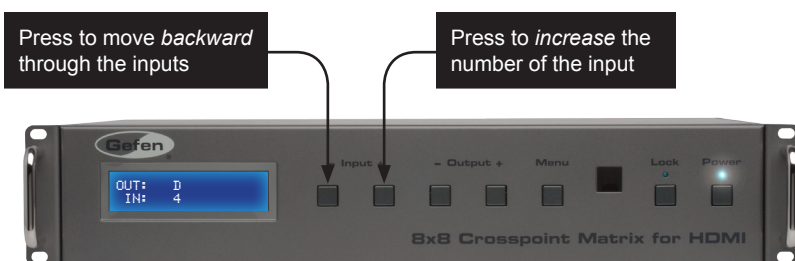
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Press the **Output -** button will cycle through each output, from right to left:



- Once the output is selected, select the input by pressing the **Input -** or **Input +** button.

Consecutively pressing the **Input +** button will increment the input source value by a factor of 1 (within a range of 1 - 8). Pressing the **Input -** button will decrement the input source value by a factor of 1 (within a range of 1 - 8).



For this routing example, we will route Input 3 to Output D. Therefore, we will first select Output D (using the **Output -** / **Output +** buttons) and then use the **Input -** / **Input +** buttons to change Input 4 to Input 3:



- Press the **Menu** button to complete the routing operation. The LCD on the front panel will return to the routing status screen.



The routing status screen will reflect the new routing state:



Input 3 is now routed
to Output D



NOTE: The matrix will automatically return to the routing status screen after about 20 seconds if the Menu button is not pressed.

One-to-One Routing

When an input and output share the same number, it is called “one-to-one” routing. Although the 8x8 Crosspoint Matrix uses alphabetic characters to represent each output, A - H can still be thought of as Output 1 - Output 8. Therefore, a “one-to-one” routing state would exist if Input 1 is routed to Output A, Input 2 is routed to Output B, Input 3 is routed to Output C, and so on. This is the factory-default routing state.

Locking the Matrix

Locking the matrix will prevent any changes by disabling all buttons (except the **Lock** button) on the front panel. This feature is useful in preventing routing or other changes caused by accidental bumping or pressing of the buttons on the front panel.

1. Press the **Lock** button on the front panel. The **Lock LED** will glow bright blue, indicating that the matrix is now locked.



If any front-panel buttons are pressed, while the matrix is locked, the following message will be displayed in the front-panel LCD:



2. To unlock the matrix, press the **Lock** button again. The **Lock LED** button will turn off, indicating that the matrix is no longer locked.

Fast Switching Technology



What is Fast Switching Technology?

Fast Switching Technology (FST) is a Gefen software implementation for HDMI products. FST was created to improve the lengthy HDMI authentication process, based on the HDMI and HDCP specifications.

FST provides quicker audio/video source switching and greatly improves the overall audio/video system behavior and performance when more than one HDTV display is used in the system setup.

FST allows connecting / disconnecting or turning ON / OFF of HDTV displays without having these activities affect other Hi-Def sources routed to any other HDTV display in the same system.

Fast Mode

Setting the *8x8 Crosspoint Matrix for HDMI* to Fast Mode will improve performance when connecting / disconnecting Hi-Def sources, and powering ON / OFF HDTV displays.



NOTE: When switching from **Slow Mode** to **Fast Mode**, the HDTV displays connected to the Matrix will blink momentarily.

Slow Mode

When set to Slow Mode, the Matrix will follow the standard **authentication process, based on the HDMI and HDCP specifications**. Slow Mode is recommended when the source does not support multiple devices.

Determining the Current Switching Mode

Each HDMI input can be set to Fast Mode or Slow Mode. It is recommended that each HDMI input be set to Fast Mode for best performance. By default, all inputs are set to Fast Mode.

1. To display the current switching mode, press the **Menu** button on the front panel until the switching mode screen is displayed.



IN: 12345678
MODE: FFFFFFFF

The top row (In) represents each HDMI input on the matrix. The bottom row (Mode) represents the current switching mode of each HDMI input.

2. To return to the routing status screen, press the **Menu** button until the routing status screen is displayed.



IN: ABCDEFGH
MODE: 12335678

Changing the Switching Mode

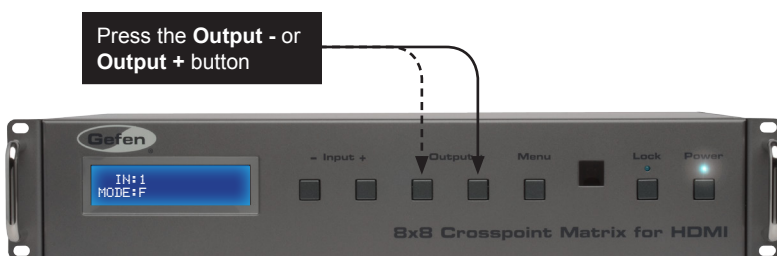
Changing the switching mode on an input is very similar to the routing method used earlier. Let's look at an example.

1. Press the **Menu** button on the front panel until the switching mode screen is displayed.



IN: 12345678
MODE: FFFFFFFF

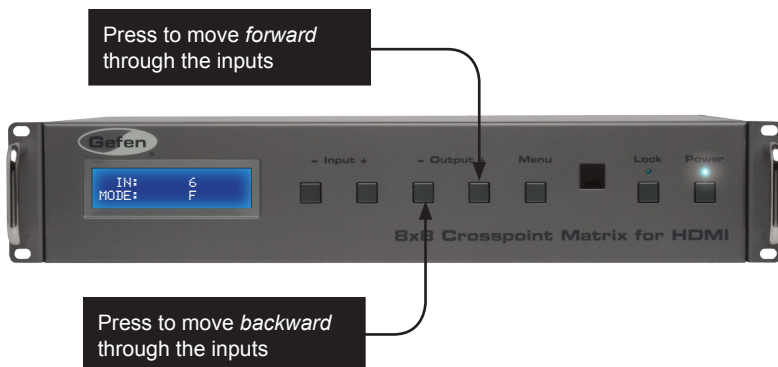
2. Select the desired input by pressing the **Output -** or **Output +** button. The switching mode for the currently selected input will be displayed in the LCD.



IN: 1
MODE: F

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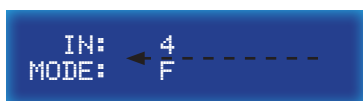
Press the **Output -** or **Output +** button again to cycle through each input.



Pressing the **Output +** button will cycle through each output, from left to right:



Pressing the **Output -** button will cycle through each output, from right to left:



4. Once the input is selected, select the switching mode (F = fast, S = slow) by pressing the **Input -** or **Input +** button. For this example, we will select Input 4 and set it to slow (S) switching mode.



Once the desired switching mode has been set for the specified input, additional inputs can be changed without having to exit the switching mode screen.

To do this, use the **Output -** or **Output +** button to select a different input. Then, use the **Input -** or **Input +** buttons to change the switching mode for the selected input.

- To complete the switching mode process, press the **Menu** button on the front panel.



IN: 12345678
MODE: FFFSFSSF

In the example, above, we also set Input 6 and 7 to slow (S) switching mode.

- Press the Menu button twice to return to the routing status screen.

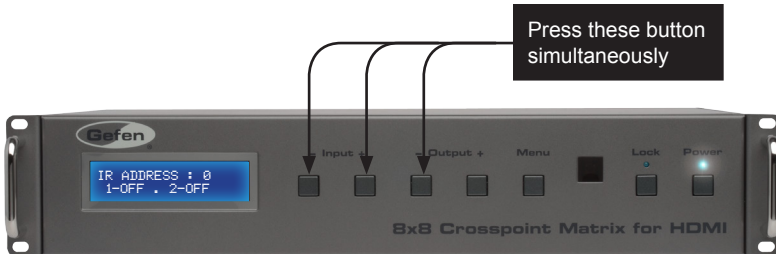


OUT: ABCDEFGH
IN: 12335678

Setting the IR Channel

In order for the 8x8 Crosspoint Matrix for HDMI to communicate with the included IR remote control unit, both the matrix must be set to the same IR channel as the IR remote. Follow the procedure outlined below to set the IR channel on the 8x8 Crosspoint Matrix for HDMI.

1. From the Routing screen, simultaneously press the **Input -**, **Input +**, and the **Output -** buttons to display the IR Address screen. The current IR address will be displayed along with the DIP switch settings for the IR remote control.



IR ADDRESS : 0
1-OFF . 2-OFF

2. Use the **Input -** or **Input +** buttons to change the IR channel. For this example, we will set the IR channel to 2.

As the IR channel is changed, the LCD will display the correct DIP switch settings for the IR remote control unit.

IR ADDRESS : 2
1-OFF . 2-ON

See [Setting the IR Channel](#) for instructions on setting the IR channel for the IR remote control unit.

3. Press the **Menu** button once the desired IR channel is set. The matrix will return to the routing status screen.

OUT: ABCDEFGH
IN: 12335678

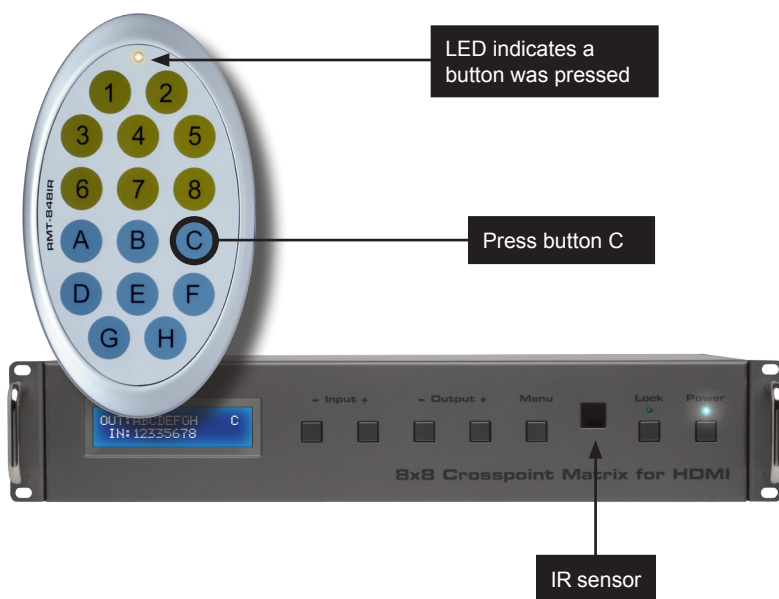
Using the IR Remote Control

Routing Sources using the IR Remote Control

The included IR Remote Control unit provides discrete routing between each input and output. The IR remote control unit consists of 16 buttons. Each button represents an input / output.

Let's look at an example: Route Input 5 to Output C

1. Point the IR remote control at the IR sensor on the front panel of the matrix.
2. First, select the output by pressing button C on the IR remote control unit. The LED on the IR remote control unit will glow bright yellow to indicate that a button was pressed.



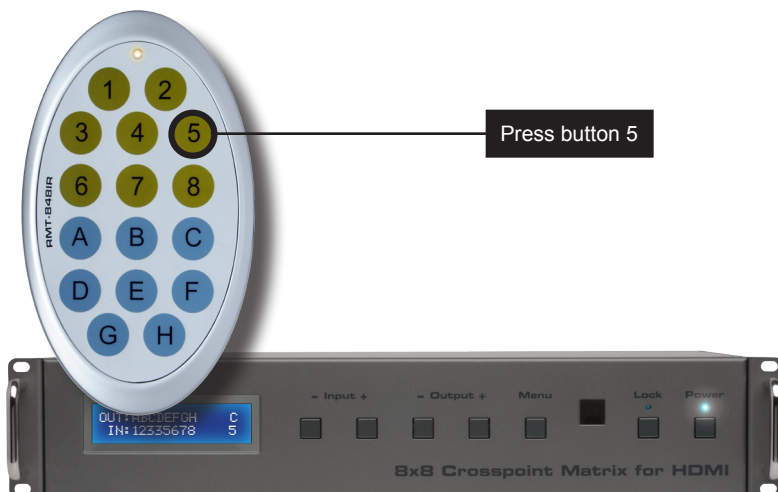
The front-panel LCD will display the selected output:



3. Next, press the desired input. In this example, we want to route Input 5 to Output C. Therefore, press button 5 on the IR remote control unit.

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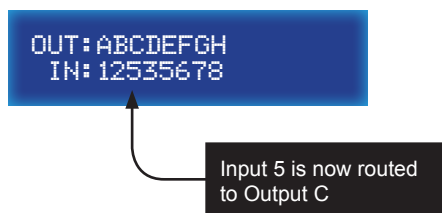
Once again, the LED on the IR remote control unit will flash bright yellow to indicate that a button was pressed.



The front-panel LCD will display the selected input. In addition, the new routing state will immediately be reflected:



4. After a few seconds, the matrix will return to the routing status screen.



EDID Management

External EDID Management

The 8x8 Crosspoint Matrix for HDMI features EDID Management. Before the source can send video or audio signals, the source device reads the EDID (Extended Display Identification Data) from the output devices connected to the 8x8 Crosspoint Matrix for HDMI. The EDID contains information about what type of audio/video data that the source can send to each output device.

The following EDID features are copied from Output A:

- Supported Resolutions
- 3D Support
- Audio Features

Display Connections:

- If a device is not connected to Output A, then no EDID changes are made, meaning that the previous EDID information will be used. This state will be in effect until a display is connected to Output A and the Matrix is power-cycled.
- EDID is built from Output A to the Input. The audio block will be copied from Output A. EDID-copying is performed only when the Matrix is reset or power-cycled.



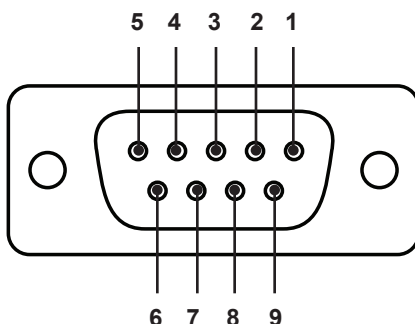
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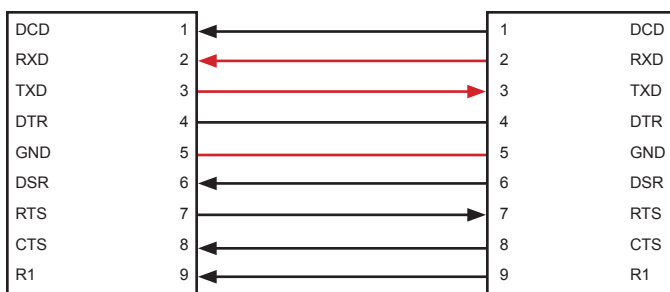
RS-232 and IP Configuration

RS-232 Interface



RS-232 Controller

Matrix



Only TXD, RXD, and GND are used.

RS232 Settings

Baud rate 19200
 Data bits 8
 Parity bits None
 Stop bits 1
 Flow Control None



IMPORTANT: When sending RS-232 commands, a carriage return must be included at the end of the command. A space *must* be included between the command and the parameter.

IP / UDP Configuration

The *8x8 Crosspoint Matrix for HDMI* supports IP-based control using Telnet, UDP, or the built-in Web-based GUI. To set up IP control, the network settings for the *8x8 Crosspoint Matrix for HDMI* must be configured via RS-232. The default network settings for the matrix are as follows:

Description	IP Address / Port	Description	IP Address / Port
IP Address	192.168.1.72	UDP / Telnet Port	23
Subnet	255.255.255.0	Local UDP Port	50008
Gateway	192.168.1.254	Remote UDP IP	192.168.1.80
HTTP Port	80	Remote UDP Port	50007

1. Connect an RS-232 cable from the PC to the *8x8 Crosspoint Matrix for HDMI*. Also make sure that an Ethernet cable is connected between the matrix and the network.
2. Launch a terminal emulation program (e.g. HyperTerminal) and use the RS-232 settings listed on the previous page.



NOTE: Depending upon the network, all related IP, Telnet, and UDP settings will need to be assigned. Consult your network administrator to obtain the proper settings.

3. Set the IP address for the matrix using the `#sipadd` command.
4. Set the subnet mask using the `#snetmask` command.
5. Set the gateway (router) IP address using the `#sgateway` command.
6. Set the Telnet listening port using the `#set_telnet_port` command.
7. Set the HTTP listening port using the `#set_http_port` command.
8. Set the UDP remote IP address for the matrix using the `#set_udp_remote_ip` command.
9. Set the UDP listening port for the matrix using the `#set_udp_port` command.
10. Set the UDP remote port for the matrix using the `#set_udp_remote_port` command.
11. Reboot the matrix to apply all changes, then type the IP address that was specified in step 3, in a Web browser to access the Web GUI. Use the same IP address to Telnet to the matrix.

RS-232 / IP Commands

IP / Telnet Configuration

Command	Description
#display_telnet_welcome	Enables / disables the Telnet welcome message
#ipconfig	Displays the current IP configuration
#resetip	Resets the IP configuration to factory-default settings
#set_http_port	Sets the Web server listening port
#set_telnet_pass	Sets the Telnet password
#set_telnet_port	Sets the TCP terminal port
#set_webui_ad_pass	Sets the Administrator password
#set_webui_op_pass	Set the Operator password
#sgateway	Sets the IP address of the (router) gateway
#show_gateway	Displays the current gateway address of the matrix
#show_http_port	Displays the current HTTP listening port of the matrix
#show_ip	Displays the current IP address of the matrix
#show_mac_addr	Displays the MAC address of the matrix
#show_netmask	Displays the current net mask of the matrix
#show_telnet_port	Displays the current Telnet port for the matrix
#show_ver_data	Displays the current firmware and hardware version
#sipadd	Sets the IP Address
#snetmask	Sets the Net Mask
#use_telnet_pass	Enables / disables the Telnet password

#display_telnet_welcome

The #display_telnet_welcome command enables / disables the Telnet welcome message during a Telnet session.

The welcome message is: Welcome to EXT-HDFST-848CPN TELNET

Syntax:

```
#display_telnet_welcome param1
```

Parameters:

param1 Value [0 ... 1]

Value	Description
0	Disable welcome message
1	Enable welcome message

Example:

```
#display_telnet_welcome 1
Telnet Welcome Screen Is Enable
```

#ipconfig

The #ipconfig command displays the current TCP/IP settings. Also see the #show_ip, #show_netmask, and #show_gateway commands.

Syntax:

```
#ipconfig
```

Parameters:

None

Example:

```
#ipconfig
IP Configuration is :
IP: 192.168.1.72
NETMASK: 255.255.255.0
GATEWAY: 192.168.1.254
```

#resetip

The #resetip command resets the IP configuration to factory-default settings. The matrix must be rebooted after executing this command.

Syntax:

```
#resetip
```

Parameters:

None

Example:

```
#resetip
IP Configuration Was Reset To Factory Defaults.
```

#set_http_port

The #set_http_port command specifies the Web server listening port. The matrix must be rebooted after executing this command. The default port setting is 80. The current HTTP listening port can be displayed using the #show_http_port command.

Syntax:

```
#set_http_port param1
```

Parameters:

<i>param1</i>	Port	[1 ... 1024]
---------------	------	--------------

Example:

```
#set_http_port 82
HTTP Communication Port 82 Is Set. Please Reboot The Unit.
```

#set_telnet_pass

The #set_telnet_pass command sets the Telnet password. The password cannot exceed 20 characters in length. The matrix must be rebooted after executing this command. The default password is Admin.

Syntax:

```
#set_telnet_pass param1
```

Parameters:

<i>param1</i>	Password
---------------	----------

Example:

```
#set_telnet_pass reindeer
TELNET Interface Password Is Set.
```

#set_telnet_port

The #set_telnet_port command sets the Telnet listening port. The matrix must be rebooted after executing this command. The default port setting is 23. Use the #show_telnet_port command to display the current Telnet listening port.

Syntax:

```
#set_telnet_port param1
```

Parameters:

param1	Port	[1 ... 1024]
--------	------	--------------

Example:

```
#set_tcp_term_port 21
Telnet Communication Port 21 Is Set. Please Reboot The Unit.
```

#set_webui_ad_pass

The #set_webui_ad_pass command sets the Administrator password for the Web interface. The password cannot exceed 8 characters in length. The default password is Admin. To set the Operator password, use the #set_webui_op_pass command.

Syntax:

```
#set_webui_ad_pass param1
```

Parameters:

param1	Password
--------	----------

Example:

```
#set_webui_ad_pass everest
Web UI Administrator Password Is Set
```

#set_webui_op_pass

The `#set_webui_ad_pass` command sets the Operator password for the Web interface. The password cannot exceed 8 characters in length. The default password is `Admin`. To set the *Administrator* password, use the `#set_webui_ad_pass` command.

Syntax:

```
#set_webui_op_pass param1
```

Parameters:

<i>param1</i>	Password
---------------	----------

Example:

```
#set_webui_op_pass everest
Web UI Administrator Password Is Set
```

#sgateway

The `#sgateway` command sets the new IP gateway. The gateway must be typed using dot-decimal notation. The matrix must be rebooted after executing this command. The default gateway is `192.168.1.254`. Also see the `#show_gateway` and `#ipconfig` commands.

Syntax:

```
#sgateway param1
```

Parameters:

<i>param1</i>	Gateway
---------------	---------

Example:

```
#sgateway 192.168.1.1
GateWay Address 192.168.1.1 Is Set. Please Reboot The Unit.
```

#show_gateway

The #show_gateway command displays the current gateway setting of the matrix. Also see the #ipconfig command. Use the #sgateway command to set the gateway address.

Syntax:

```
#show_gateway
```

Parameters:

None

Example:

```
#show_gateway  
GATEWAY ADDRESS IS: 192.168.1.1
```

#show_http_port

The #show_http_port command displays the HTTP listening port of the matrix. Use the #set_http_port command to set the HTTP listening port.

Syntax:

```
#show_http_port
```

Parameters:

None

Example:

```
#show_http_port  
HTTP COMMUNICATION PORT IS: 82
```

#show_ip

The #show_ip command displays the current IP address of the matrix. Also see the #ipconfig command. Use the #sipadd command to set the IP address of the matrix.

Syntax:

```
#show_ip
```

Parameters:

None

Example:

```
#show_ip  
IP ADDRESS IS: 192.168.1.249
```

#show_mac_addr

The #show_mac_addr command displays the MAC address of the matrix. The MAC address is also displayed within the #Web interface.

Syntax:

```
#show_mac_addr
```

Parameters:

None

Example:

```
#show_mac_addr  
MAC ADDRESS IS: 00-1a-07-11-01-06
```

#show_netmask

The `#show_netmask` command displays the current net mask setting of the matrix. Also see the `#ipconfig` command. Use the `#snetmask` command to set the gateway address.

Syntax:

```
#show_netmask
```

Parameters:

None

Example:

```
#show_netmask
NETMASK ADDRESS IS: 255.255.255.0
```

#show_telnet_port

The `#show_telnet_port` command displays the Telnet listening port of the matrix. Use the `#set_telnet_port` command to set the Telnet listening port.

Syntax:

```
#show_telnet_port
```

Parameters:

None

Example:

```
#show_telnet_port
TELNET COMMUNICATION PORT IS: 21
```

#show_ver_data

The #show_ver_data command displays the current firmware and hardware version.

Syntax:

```
#show_ver_data
```

Parameters:

None

Example:

```
#show_ver_data  
SOFTWARE AND HARDWARE VERSION: v3.1G PCB-1707*B
```

#sipadd

The #sipadd command sets the IP address of the matrix. Use the #show_ip or #ipconfig command to display the current IP address of the matrix. The matrix must be rebooted after executing this command.

Syntax:

```
#sipadd param1
```

Parameters:

None

Example:

```
#sipadd 192.168.1.249  
IP Address 192.168.1.249 Is Set. Please Reboot The Unit.
```

#snetmask

The #snetmask command sets the subnet mask. The net mask must be entered using dot-decimal notation. The matrix must be rebooted after executing this command. The default net mask is 255.255.255.0. Use the #show_netmask or #ipconfig command to display the current net mask.

Syntax:

```
#snetmask param1
```

Parameters:

<i>param1</i>	Gateway
---------------	---------

Example:

```
#snetmask 255.255.255.0  
New IP mask set to: 255.255.255.0
```

The `#use_telnet_pass` command enables or disables the password when starting a Telnet session.

```
#use_telnet_pass param1
```

<i>param1</i>	Value	[0 ... 1]
---------------	-------	-----------

Example:

```
#use_telnet_pass 1
Telnet Interface Password Is Enable
```

UDP Configuration

Command	Description
<code>#set_udp_port</code>	Sets the local UDP port
<code>#set_udp_remote_ip</code>	Sets the remote UDP IP address
<code>#set_udp_remote_port</code>	Sets the remote UDP port
<code>#show_udp_port</code>	Displays the local UDP server listening port
<code>#show_udp_remote_ip</code>	Displays the remote UDP IP address
<code>#show_udp_remote_port</code>	Displays the remote UDP port
<code>#use_udp_enable</code>	Enables / disabled UDP access

#set_udp_port

The `#set_udp_port` command sets the local UDP server listening port. The default port setting is 21. Use the `#show_udp_port` to display the current UDP port setting.

Syntax:

```
#set_udp_port param1
```

Parameters:

<i>param1</i>	Port	[1 ... 65535]
---------------	------	---------------

Example:

```
#set_udp_port 1024
UDP COMMUNICATION PORT 1024 IS SET
```

#set_udp_remote_ip

The `#set_udp_remote_ip` command sets the remote UDP IP address. The IP address must be specified using dot-decimal notation. The default UDP remote IP address is 192.168.1.255. Use the `#show_udp_remote_ip` command to display the current UDP remote IP address.

Syntax:

```
#set_udp_remote_ip param1
```

Parameters:

<i>param1</i>	IP address
---------------	------------

Example:

```
#set_udp_remote_ip 192.168.1.227
REMOTE UDP IP ADDRESS 192.168.1.227 IS SET.
```

#set_udp_remote_port

The `#set_udp_remote_port` command sets the remote UDP listening port. The default UDP remote port is 50008. Use the `#show_udp_remote_port` to display the current remote UDP listening port.

Syntax:

```
#set_udp_remote_port param1
```

Parameters:

<i>param1</i>	Port	[1 ... 65535]
---------------	------	---------------

Example:

```
#set_udp_remote_port 5500
REMOTE UDP COMMUNICATION PORT 5500 IS SET.
```

#show_udp_port

The #show_udp_port command displays the current UDP port. Use the #set_udp_port command to set the local UDP server listening port.

Syntax:

```
#show_udp_port
```

Parameters:

None

Example:

```
#show_udp_port
UDP COMMUNICATION PORT IS: 1024
```

#show_udp_remote_ip

The #show_udp_remote_ip command displays the current remote UDP IP address. Use the #set_udp_remote_ip command to set the remote UDP address.

Syntax:

```
#show_udp_remote_ip
```

Parameters:

None

Example:

```
#show_udp_remote_ip
REMOTE UDP IP ADDRESS IS: 192.168.1.227
```

#show_udp_remote_port

The #show_udp_remote_port command displays the current remote UDP listening port. Use the #set_udp_remote_port command to set the remote UDP listening port.

Syntax:

```
#show_udp_remote_port
```

Parameters:

None

Example:

```
#show_udp_remote_port
REMOTE UDP COMMUNICATION PORT IS: 5500
```

#use_udp_enable

The #use_udp_enable command enables or disables UDP access mode. The default value is 0 (disabled).

Syntax:

```
#use_udp_enable param1
```

Parameters:

param1

Value

Value	Description
0	Disable UDP access
1	Enable UDP access

Example:

```
#use_udp_access 1
UDP ACCESS IS ENABLE
```

Routing / Naming / +5V / Presets

Command	Description
<code>#lock_matrix</code>	Locks / unlocks the matrix
<code>#recall_preset</code>	Recalls the specified routing preset
<code>#save_preset</code>	Save the current routing preset state
<code>#set_bank_name</code>	Sets the name of the specified EDID bank
<code>#set_input_name</code>	Sets the name of the specified input
<code>#set_output_name</code>	Sets the name of the specified output
<code>#set_preset_name</code>	Sets the name of the specified preset
<code>#show_bank_name</code>	Displays the name of the specified EDID bank
<code>#show_input_name</code>	Displays the name of the specified input
<code>#show_output_name</code>	Displays the name of the specified output
<code>#show_preset_name</code>	Displays the name of the specified preset
<code>#show_r</code>	Displays the routing status of the specified output
<code>r</code>	Routes an input to the specified output(s)
<code>s</code>	Routes the specified input to all outputs

#lock_matrix

The `#lock_matrix` command locks / unlocks the matrix.

Syntax:

```
#lock_matrix param1
```

Parameters:

param1 Value

Value	Description
0	Unlock matrix
1	Lock matrix

Example:

```
#lock_matrix 1
MATRIX IS LOCKED
```

#recall_preset

The #recall_preset command restores the specified routing / masking preset. If the specified preset is empty, then Empty Set will be returned.

Syntax:

```
#recall_preset param1
```

Parameters:

<i>param1</i>	Preset	[1 ... 8]
---------------	--------	-----------

Example:

```
#recall_preset 2  
RECALLED THE ROUTING STATE OF PRESET 2
```

#save_preset

The #save_preset command saves the current routing and masking state to a specified preset. To load a saved preset, use the #recall_preset command.

Syntax:

```
#save_preset param1
```

Parameters:

<i>param1</i>	Preset	[1 ... 8]
---------------	--------	-----------

Example:

```
#save_preset 2  
Current routing state is saved to preset
```

#set_bank_name

The #set_bank_name command names the specified bank. The name of the bank cannot exceed 20 characters in length. Spaces are not permitted when naming outputs. If a space is required, use the underscore ("_") character.

Syntax:

```
#set_bank_name param1 param2
```

Parameters:

<i>param1</i>	Bank	[1 ... 8]
<i>param2</i>	Name	

Example:

```
#set_bank_name 4 Dell_24  
Dell_24 NAME IS ASSIGNED TO BANK 4
```

#set_input_name

The #set_input_name command names the specified input. The name of the input cannot exceed 20 characters in length. Spaces are not permitted when naming outputs. If a space is required, use the underscore ("_") character.

Syntax:

```
#set_input_name param1 param2
```

Parameters:

<i>param1</i>	Input	[1 ... 8]
<i>param2</i>	Name	

Example:

```
#set_input_name 5 Blu-ray  
Blu-ray NAME IS ASSIGNED TO INPUT 5
```

#set_output_name

The `#set_output_name` command names the specified output. The name of the output cannot exceed 20 characters in length. Spaces are not permitted when naming outputs. If a space is required, then use the underscore (“_”) character.

Syntax:

```
#set_output_name param1 param2
```

Parameters:

<i>param1</i>	Output	[A ... H]
<i>param2</i>	Name	

Example:

```
#set_output_name d Dell_30  
Dell_30 NAME IS ASSIGNED TO OUTPUT D
```

#set_preset_name

The `#set_preset_name` command names the specified preset. The name of the preset cannot exceed 20 characters in length. Spaces are not permitted when naming presets. If a space is required, then use the underscore (“_”) character.

Syntax:

```
#set_preset_name param1 param2
```

Parameters:

<i>param1</i>	Preset	[1 ... 8]
<i>param2</i>	Name	

Example:

```
#set_preset_name 2 Studio51  
Studio51 NAME IS ASSIGNED TO PRESET 2
```

#show_bank_name

The #show_bank_name command displays the name of the specified bank. Use the #set_bank_name command to set the bank name.

Syntax:

```
#show_bank_name param1
```

Parameters:

<i>param1</i>	Bank	[1 ... 8]
---------------	------	-----------

Example:

```
#show_bank_name 4  
THE NAME FOR BANK 4 IS: Dell_24
```

#show_input_name

The #show_input_name command displays the name of the specified input. Use the #set_input_name to set the input name.

Syntax:

```
#show_input_name param1
```

Parameters:

<i>param1</i>	Input	[1 ... 8]
---------------	-------	-----------

Example:

```
#show_input_name 5  
THE NAME FOR INPUT 5 IS: Blu-ray
```

#show_output_name

The #show_output_name command displays the name of the specified output.

Syntax:

```
#show_output_name param1
```

Parameters:

<i>param1</i>	Output	[A ... H]
---------------	--------	-----------

Example:

```
#show_output_name d  
THE NAME FOR OUTPUT D IS: Dell_30
```

#show_preset_name

The #show_preset_name command displays the name of the specified preset.

Syntax:

```
#show_preset_name param1
```

Parameters:

<i>param1</i>	Preset	[1 ... 8]
---------------	--------	-----------

Example:

```
#show_preset_name 2  
THE NAME FOR PRESET 2 IS: Studio51
```

#show_r

The #show_r command displays the routing status of the specified output.

Syntax:

```
#show_r param1
```

Parameters:

<i>param1</i>	Output	[A ... H]
---------------	--------	-----------

Example:

```
#show_r d
OUTPUT D(Dell_30) IS ROUTED TO INPUT 5(Blu-ray)
```

r

The r command routes the specified input to the specified outputs. Up to eight outputs can be specified at a time. Do not precede this command with the “#” symbol. If *param2* = 0, then the specified input will be routed to all outputs. Also see the s command on the next page.

Syntax:

```
r param1 param2 [... param9]
```

Parameters:

<i>param1</i>	Input	[1 ... 8]
<i>param2</i>	Output	[A ... H]

Example:

```
r 1 c d h
INPUT 1 IS SET TO OUTPUTS C, D, H
```

```
r 1 0
INPUT 1 IS SET TO ALL OUTPUTS.
```

S

The `s` command routes the specified inputs to all outputs. Do not precede this command with the “#” symbol. Also see the `r` command on the previous page.

Syntax:

```
s param1
```

Parameters:

<i>param1</i>	Input	[1 ... 8]
---------------	-------	-----------

Example:

```
s 2
INPUT 2 IS SET TO ALL OUTPUTS.
```

```
s 0
Routing 1-1,2-2,...
```

Status

Command	Description
<code>#help</code>	Displays the list of available commands
<code>#show_fw</code>	Displays the current version of firmware
<code>#show_hpd</code>	Displays the HPD status of the specified output
<code>#show_rsense</code>	Displays the RSENSE status of the specified output
<code>m</code>	Displays the current routing status of the matrix
<code>n</code>	Displays the routing state for the specified output

#help

The `#help` command displays the list of available RS-232 / IP commands. The `#help` command can also be used to provide help on a specific command.

Syntax:

```
#help [param1]
```

Parameters:

param1 Command (optional)

Notes:

When asking for help on a specific command, the “#” character must be included as part of the command.

Example:

```
#help r
```

```
R PARAM1 PARAM 2...PARAM 9
ROUTING COMMAND
PARAM 1 = 1 - 8 (INPUT)
PARAM 2 = 0 (ALL OUTPUTS)
PARAM 2...PARAM 9 = A - H (OUTPUTS)
```

#show_fw

The `#show_fw` command displays the current version of firmware. Also see the `#show_ver_data` command.

Syntax:

```
#show_fw
```

Parameters:

None

Example:

```
#show_fw
FIRMWARE VERSION = EXT-HDFST-848CPN v3.1G
```

#show_hpd

The `#show_hpd` command displays the HPD (Hot-Plug Detect) status of the specified output. If a display (sink) is not connected or if the sink is not powered, then `Low` will be returned. Otherwise, `High` is returned.

Syntax:

```
#show_hpd param1
```

Parameters:

<i>param1</i>	Output	[A ... H]
---------------	--------	-----------

Example:

```
#show_hpd c
HPD OF OUTPUT C(OUTPUT3) IS LOW
```

```
#show_hpd d
HPD OF OUTPUT D(Dell_30) IS HIGH
```

#show_rsense

The #show_rsense command displays the rsense status of the specified output.

Syntax:

```
#show_rsense
```

Parameters:

None

Example:

```
#show_rsense d
RSENSE OF OUTPUT D(Dell_30) IS HIGH
```

#show_hpd

The #show_hpd command displays the HPD (Hot-Plug Detect) status of the specified output. If a display (sink) is not connected or if the sink is not powered, then `Low` will be returned. Otherwise, `High` is returned.

Syntax:

```
#show_hpd param1
```

Parameters:

<i>param1</i>	Output	[A ... H]
---------------	--------	-----------

Example:

```
#show_hpd c
HPD OF OUTPUT C(OUTPUT3) IS LOW

#show_hpd d
HPD OF OUTPUT D(Dell_30) IS HIGH
```

m

The `m` command displays the current routing / masking status of the matrix. Do not precede this command with the “#” symbol. Also see the `n` command.

Syntax:

`m`

Parameters:

None

Example:

`m`

Out: A B C D E F G H

In: 2 2 2 2 2 2 2 2

ALL OUTPUTS ARE UNMASKED
MATRIX IS UNLOCKED

n

The **n** command displays the routing state for the specified output. Do not precede this command with the “#” symbol. If *param1* = 0, then the routing status for all outputs are displayed. Also see the **m** command.

Syntax:

```
n param1
```

Parameters:

<i>param1</i>	Output	[A ... H]
---------------	--------	-----------

Example:

```
n d  
D2
```

```
n 0  
A2B2C2D2E2F2G2H2
```

FST

Command	Description
<code>#fst_fast</code>	Sets the specified input(s) to fast-switching mode
<code>#fst_slow</code>	Sets the specified input(s) to slow-switching mode
<code>#show_fst</code>	Displays switching mode of the specified input

#fst_fast

The `#fst_fast` command sets the specified input to fast-switching mode. If *param1* = 0, then all inputs are set to fast-switching mode

Syntax:

```
#fst_fast param1
```

Parameters:

<i>param1</i>	Input	[1 ... 8]
---------------	-------	-----------

Example:

```
#fst_fast 6  
INPUT 6 IS SET TO FST FAST MODE
```

```
#fst_fast 0  
ALL INPUTS ARE SET TO FST FAST MODE
```

#fst_slow

The #fst_slow command sets the specified input to slow-switching mode. If *param1* = 0, then all inputs are set to slow-switching mode

Syntax:

```
#fst_slow param1
```

Parameters:

<i>param1</i>	Input	[1 ... 8]
---------------	-------	-----------

Example:

```
#fst_slow 8
INPUT 8 IS SET TO FST SLOW MODE

#fst_slow 0
ALL INPUTS ARE SET TO FST SLOW MODE
```

#show_fst

The #show_fst command displays the switching mode of the specified input. If *param1* = 0, then the switching mode of all inputs will be returned.

Syntax:

```
#show_fst param1
```

Parameters:

<i>param1</i>	Input	[1 ... 8]
---------------	-------	-----------

Example:

```
#show_fst 8  
INPUT 8 (INPUT8) IS IN SLOW SWITCHING MODE
```

```
#show_fst 0  
INPUT 1 (INPUT1) IS IN FAST SWITCHING MODE  
INPUT 2 (INPUT2) IS IN FAST SWITCHING MODE  
INPUT 3 (INPUT3) IS IN FAST SWITCHING MODE  
INPUT 4 (INPUT4) IS IN FAST SWITCHING MODE  
INPUT 5 (Blu-ray) IS IN FAST SWITCHING MODE  
INPUT 6 (INPUT6) IS IN FAST SWITCHING MODE  
INPUT 7 (INPUT7) IS IN FAST SWITCHING MODE  
INPUT 8 (INPUT8) IS IN SLOW SWITCHING MODE
```

Masking

Command	Description
<code>#echo</code>	Enables / disables RS-232 echo
<code>#fadefault</code>	Resets matrix to factory-default routing and masking
<code>#hdcp</code>	Disables / enables HDCP detection on the specified output
<code>#hpd_pulse</code>	Cycles with HPD line on the specified output
<code>#lock_edid</code>	Locks the local EDID during a power-cycle event
<code>#mask</code>	Masks the specified output(s)
<code>#power</code>	Toggles the power state of the matrix
<code>#reboot</code>	Reboots the matrix
<code>#set_edid</code>	Copies EDID data between inputs, outputs, and banks
<code>#set_ir</code>	Sets the IR channel of the matrix
<code>#show_hdcp</code>	Displays the HDCP status of the specified output
<code>#show_ir</code>	Displays the current IR channel of the matrix
<code>#show_mask</code>	Displays the mask status of the specified output
<code>#show_out_colordpt</code>	Displays the current color depth of the output signal
<code>#show_out_res</code>	Displays the maximum output resolution of a display
<code>#unmask</code>	Unmasks the specified output(s)

#echo

The `#echo` command enables / disables the RS-232 echo. Disabling echo will prevent command feedback from being displayed. Echo is enabled by default.

Syntax:

```
#echo
```

Parameters:

param1

Value

Value	Description
0	Disable echo
1	Enable echo

Example:

```
#echo 0  
LOCAL ECHO IS OFF
```

#fadefault

The #fadefault command resets the routing and masking to factory-default settings.

Syntax:

```
#fadefault
```

Parameters:

None

Example:

```
#fadefault
MATRIX WAS RESET TO FACTORY DEFAULTS
INPUT 1 IS ROUTED TO OUTPUT 1
INPUT 2 IS ROUTED TO OUTPUT 2
...
...
LOCAL ECHO IS ON
ALL OUTPUTS ARE UNMASKED
ALL INPUTS ARE SET TO FST FAST MODE
IP ADDRESS IS: 192.168.1.72
NETMASK ADDRESS IS: 255.255.255.0
GATEWAY ADDRESS IS: 192.168.1.1
HTTP Communication Port 80 Is Set.
Telnet Communication Port 23 Is Set.
UDP Echo Server Communication Port 50007 Is Set.
Remote UDP IP Address 192.168.1.80 Is Set.
Remote UDP Communication Port 50008 Is Set.
UDP Access is Disable
Telnet Interace Password Is Disable
TELNET User Name Admin Is Set.
TELNET Interface Password Is Set.
Telnet Welcome Screen Is Enable
Web UI Operator Password Is Set
Web UI Administrator Password Is Set
ALL INPUTS HDCP ENABLE.
INPUT NAME INIT....
OUTPUT NAME INIT....

BANK NAME INIT....
PRESET NAME INIT....

MATRIX WILL REBOOT SHORTLY *REBOOT UNIT IN 2 SECONDS

EXT-HDFST-848CPN v3.1G
A1B2C3D4E5F6G7H8
```

#hdcv

The #hdcv command disabled HDCP detection on the specified input.



NOTE: Some source (computers, etc.) will enable HDCP if an HDCP-compliant display is detected. Set *param2* = 1 to ignore detection of an HDCP-compliant display. Disabling this feature does **not** decrypt HDCP content.

Syntax:

```
#hdcv param1 param2
```

Parameters:

<i>param1</i>	Input	[1 ... 8]
<i>param2</i>	Value	

Value	Description
0	Disable HDCP detection
1	Enable HDCP detection

Example:

```
#hdcv 3 0
INPUT 3 HDCP IS DISABLE
```

#hpd_pulse

The #hpd_pulse command cycles the HPD line on the specified input. This command is the equivalent of performing a physical hot-plug (disconnecting and reconnecting the input cable) on the source device.

Syntax:

```
#hpd_pulse param1
```

Parameters:

<i>param1</i>	Input	[1 ... 8]
---------------	-------	-----------

Example:

```
#hpd_pulse 6  
HPD PULSE HAS BEEN SENT TO INPUT 6
```

#lock_edid

The #lock_edid command locks / unlocks the EDID, stored on all inputs, during a power cycle. By default, EDID data is not locked.

Syntax:

```
#lock_edid param1
```

Parameters:

param1

Value

Value	Description
0	Unlock EDID
1	Lock EDID

Example:

```
#lock_edid 1  
MATRIX EDID IS LOCKED
```

#mask

The `#mask` command masks the specified outputs. Multiple outputs can be specified. If `param1` = 0, then all outputs will be masked. Use the `#unmask` command to disable masking on specified outputs.

Syntax:

```
#mask param1
```

Parameters:

<i>param1</i>	Output	[A ... H]
---------------	--------	-----------

Example:

```
#mask b  
OUTPUT B IS MASKED
```

#power

The `#power` command is used to power-ON or power-OFF the matrix.

Syntax:

```
#power param1
```

Parameters:

param1

Value

Value	Description
0	Power OFF
1	Power ON

Example:

```
#power 0  
MATRIX IS OFF
```

```
#power 1  
MATRIX IS ON
```

#reboot

The #reboot command reboots the matrix.

Syntax:

#reboot

Parameters:

None

Example:

```
#reboot
MATRIX WILL REBOOT SHORTLY *REBOOT UNIT IN 2 SECONDS
```

```
EXT-HDFST-848CPN v3.1G
A1B2C3D4E5F6G7H8
```

#set_edid

The #set_edid command sets the specified EDID type for an input or EDID bank.

Syntax:

```
#set_edid param1 param2 param3 param4
```

Parameters:

param1 Source type [String]

Src. type	Description
default	Uses default EDID
dynamic	Uses dynamic EDID
bank	Uses EDID bank
output	used EDID on output (sink)

param2 Source number [0 ... 8]

Source no.	Description
0	Default EDID
1 ... 8	EDID bank
1 ... 8	Output

param3 Target type [String]

Target	Description
input	Specifies an input
bank	Specifies an EDID bank

param4 Target number [String]

Target no.	Description
1 ... 8	Input
1 ... 8	EDID bank

Notes:

If *param1* = default or *param1* = dynamic, then set *param2* = 0.

Using Dynamic EDID

When *param1* = dynamic, the specified input will be set to Dynamic EDID. This can be observed by accessing the Manage EDID tab, in the Web interface. When an input is set to Dynamic EDID, the input will use the EDID of the last selected output during the routing process. The order in which outputs are routed are important when using Dynamic EDID. See the example below.

Examples:

```
#set_edid dynamic 0 input 4
COPY DYNAMIC EDID TO INPUT4.
```

In the example above, Input 4 is set to Dynamic EDID. If the following routing command is issued, then the EDID from Output C will be used (not Output B) by Input 1.

```
r 4 b c
INPUT 4 IS SET TO OUTPUTS B, C
```

However, if we wanted to use the EDID from Output B, we would write the command as:

```
r 4 c b
INPUT 4 IS SET TO OUTPUTS C, B
```

Since Output B was the last output that was specified, this will be the EDID that Input 4 will use.

This second example does not use Dynamic EDID but uses the EDID from the specified downstream sink (display, etc):

```
#set_edid output 1 input 3
COPY OUTPUT1 EDID TO INPUT3.
```

#set_ir

The #set_ir command sets the IR channel of the matrix. In order for the included IR remote control unit to function correctly with the matrix, both the matrix and the IR remote must share the same IR channel. See [Setting the IR Channel](#) for information on setting the IR channel on the IR remote control unit.

Syntax:

```
#set_ir param1
```

Parameters:

<i>param1</i>	IR channel	[0 ... 3]
---------------	------------	-----------

Example:

```
#set_ir 2  
IR CHANNEL IS SET TO CHANNEL 2
```

#show_hdcp

The #show_hdcp command displays the (disable) HDCP status for the specified input. Use the [#hdcp](#) command to enable or disable HDCP detection.

Syntax:

```
#show_hdcp param1
```

Parameters:

<i>param1</i>	Input	[1 ... 8]
---------------	-------	-----------

Example:

```
#show_hdcp 4  
INPUT 4 HDCP IS ENABLED
```

#show_ir

The `#show_ir` command displays the current IR channel of the matrix. Use the `#set_ir` command to set the IR channel of the matrix.

Syntax:

```
#show_ir
```

Parameters:

None

Example:

```
#show_ir  
CURRENT IR CHANNEL IS: 2
```

#show_mask

The `#show_mask` command displays the mask status of the specified output. Use the `#mask` command to mask outputs.

Syntax:

```
#show_mask param1
```

Parameters:

<i>param1</i>	Output	[A ... H]
---------------	--------	-----------

Example:

```
#show_mask e  
OUTPUT E (OUTPUT5) IS UNMASKED
```

#show_out_colordpt

The #show_out_colordpt command displays the color depth of the specified output. If no signal is present, NO SIGNAL will be returned.

Syntax:

```
#show_out_colordpt param1
```

Parameters:

<i>param1</i>	Output	[A ... H]
---------------	--------	-----------

Example:

```
#show_out_colordpt h  
8 BITS DVI
```

#show_out_res

The #show_out_res command displays the maximum resolution supported by the display, based on the EDID.

Syntax:

```
#show_out_res param1
```

Parameters:

<i>param1</i>	Output	[A ... H]
---------------	--------	-----------

Example:

```
#show_out_res h  
DVI
```

#unmask

The `#unmask` command unmask the specified output. The `#unmask` command unmask the specified output(s). Multiple outputs can be specified. If *param1* = 0, then all outputs will be unmasked. Use the `#mask` command to mask outputs.

Syntax:

```
#unmask param1
```

Parameters:

<i>param1</i>	Output	[A ... H]
---------------	--------	-----------

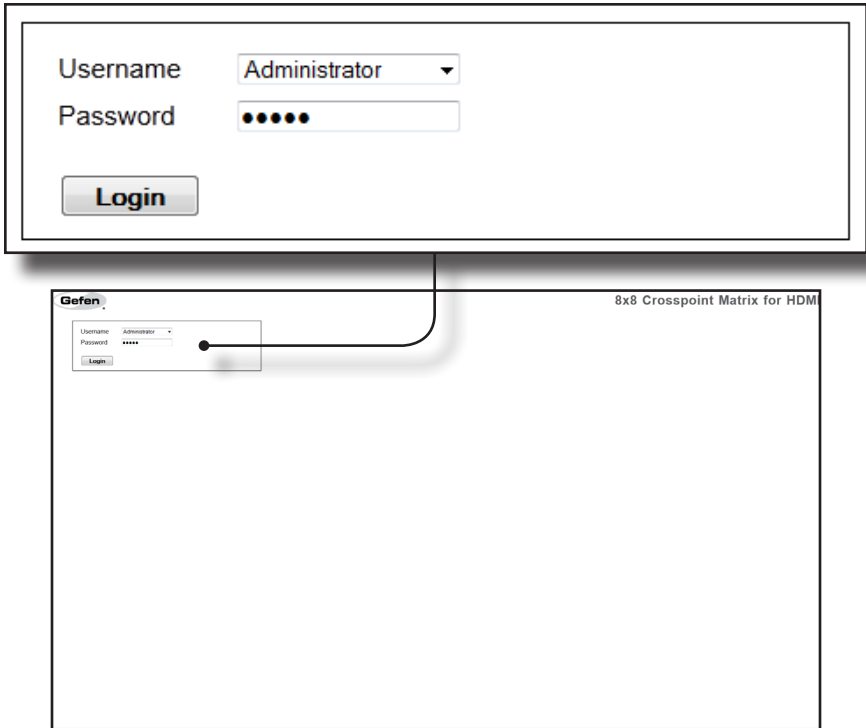
Example:

```
#unmask e  
OUTPUT E IS UNMASKED
```

Web Interface

Using the built-in Web Server

Access the built-in Web interface by entering the IP address of the matrix that was specified in step 3 on [page 29](#). Once connected to the matrix, the login screen will be displayed.



Username

Select the username from the drop-down list.

Options:

Operator, Administrator

Administrator login provides unrestricted access to all features and settings. Operator login limits access to matrix routing, display information, and routing preset features.

Password

Enter the password for the associated login. Use the `#set_webui_ad_pass` or `#set_webui_op_pass` commands to set the password for the Administrator and Operator login, respectively. The factory-default password for both Administrator and Operator login is `Admin`.

The Web interface is divided into four main pages: **Main**, **I/O Setup**, **Manage EDID**, and **Configuration**. Each of these pages is represented by a tab. Click on the desired tab to open the its page. Each page also has it's own set of tabs which can be accessed. When the Web interface is opened, the **Routing** page / tab will be displayed.



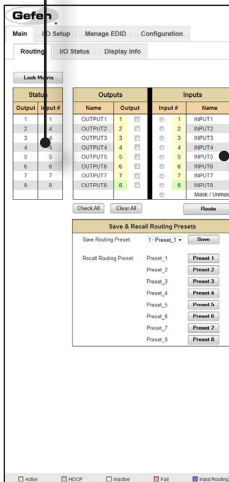
NOTE: In order to view all four tabs at the top of the screen, the user must be logged in as "Administrator". If logged-in as "Operator", only the **Main** tab will be visible.

Main ► Routing

Status

Displays the current routing status of the matrix.

Status	
Output	Input #
1	1
2	4
3	4
4	4
5	5
6	6
7	7
8	8



Input

Click the radio button next to the desired input to be routed. Only one input can be selected at a time.

Name

Displays the current name of the input. The name of each input can be changed. See [page 85](#) for more information.

Inputs		
Input #	Name	
☐	1	INPUT1
☐	2	INPUT2
☐	3	INPUT3
☐	4	INPUT4
☐	5	INPUT5
☐	6	INPUT6
☐	7	INPUT7
☒	8	INPUT8
☐	Mask / Unmask	

Lock Matrix

Locks / unlocks the matrix. When the matrix is locked, no modifications can be made using the Web GUI. When the matrix is locked, the button text will read "Unlock Matrix" and a red bar will appear across the top portion of the screen with the text "Matrix is LOCKED". Click the "Unlock Matrix" button to unlock the matrix.

Lock Matrix

Gefen 8x8 Crosspoint Matrix for HDMI

Main | IO Setup | Manage EDID | Configuration | Log Out

Routing | IO Status | Display Info

Lock Matrix

Status		Outputs		Inputs	
Output	Input #	Name	Output	Input #	Name
1	1	OUTPUT1	1	1	INPUT1
2	2	OUTPUT2	2	2	INPUT2
3	3	OUTPUT3	3	3	INPUT3
4	4	OUTPUT4	4	4	INPUT4
5	5	OUTPUT5	5	5	INPUT5
6	6	OUTPUT6	6	6	INPUT6
7	7	OUTPUT7	7	7	INPUT7
8	8	OUTPUT8	8	8	INPUT8

Check All | Clear All | Route

Save & Recall Routing Presets

Save Routing Preset: 1: Preset_1 + Save

Recall Routing Preset: Preset_1 Preset_1
Preset_2 Preset_2
Preset_3 Preset_3
Preset_4 Preset_4
Preset_5 Preset_5
Preset_6 Preset_6
Preset_7 Preset_7
Preset_8 Preset_8

Legend
Provides color-coded information on the status of each Input and Output.

Active | HDCP | Inactive | Fail | Input Routing

Gefen 8x8 Crosspoint Matrix for HDMI

Main | IO Setup | Manage EDID | Configuration | Log Out

Routing | IO Status | Display Info

Matrix is LOCKED.

Unlock Matrix

Status		Outputs		Inputs	
Output	Input #	Name	Output	Input #	Name
1	1	OUTPUT1	1	1	INPUT1
2	2	OUTPUT2	2	2	INPUT2
3	3	OUTPUT3	3	3	INPUT3
4	4	OUTPUT4	4	4	INPUT4
5	5	OUTPUT5	5	5	INPUT5
6	6	OUTPUT6	6	6	INPUT6
7	7	OUTPUT7	7	7	INPUT7
8	8	OUTPUT8	8	8	INPUT8

Check All | Clear All | Route

Save & Recall Routing Presets

Save Routing Preset: 1: Preset_1 + Save

Recall Routing Preset: Preset_1 Preset_1
Preset_2 Preset_2
Preset_3 Preset_3
Preset_4 Preset_4
Preset_5 Preset_5
Preset_6 Preset_6
Preset_7 Preset_7
Preset_8 Preset_8

Name

Displays the current name of each output. The name of each output can be changed. Refer to the [#set_output_name](#) for details on naming outputs.

Output

Click to place a check mark in the box and select the desired output. Multiple outputs can be selected at a time.

The screenshot shows the Gefen web interface. The 'Outputs' table is highlighted, showing 8 outputs. The 'Routing' configuration page is also visible, showing a table with 'Output' and 'Input' columns. The 'Check All' button is located below the 'Routing' table. The 'Route' button is located at the bottom right of the interface.

Outputs		
Name	Output	
OUTPUT1	1	☐
OUTPUT2	2	☐
OUTPUT3	3	☐
OUTPUT4	4	☐
OUTPUT5	5	☐
OUTPUT6	6	☐
OUTPUT7	7	☐
OUTPUT8	8	☐

Gefen

Main | IO Setup | Manage | EDID | Configuration

Routing | IO Status | Display Info

Lock Menu

Check All | Clear All

Save & Reset Routing Presets

Save Routing Preset: 1 - Preset_1

Reset Routing Preset: Preset_1, Preset_2, Preset_3, Preset_4, Preset_5, Preset_6, Preset_7, Preset_8

8x8 Crosspoint Matrix for HDMI

Log Out

Check All | Clear All | Route

Check All

Places a check mark in each box under the *Output #* column.

Clear All

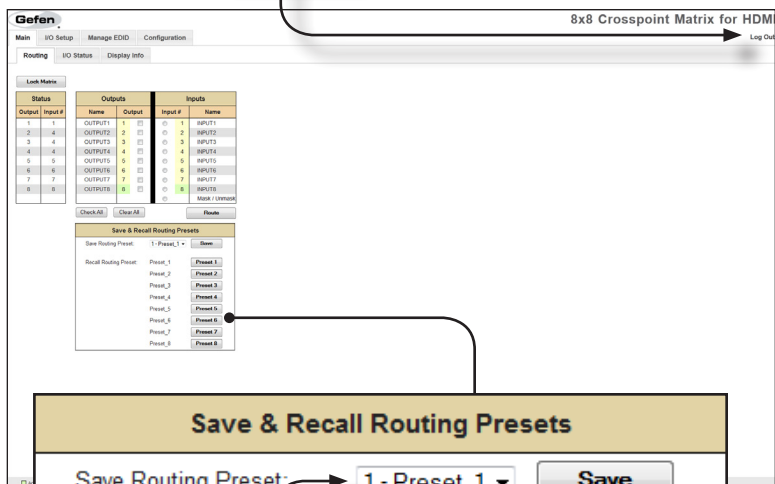
Clears all check marks from the *Output #* column.

Route

Click this button to route the current input and output selection(s).

Log Out**Log Out**

Click here to terminate the current Web session and return to the login page.

**Save Routing Preset**

Saves the current routing state to memory. Click the drop-down list to select the desired routing preset, then click the **Save** button to save the preset to memory.

Recall Routing Preset

Loads the selected routing state into memory. Click the desired button to load the desired routing preset into memory.

Main ► I/O Status

8x8 Crosspoint Matrix for HDMI									
Main I/O Setup Manage EDID Configuration									
Routing I/O Status Display Info									
Output									
	1	2	3	4	5	6	7	8	
Name	OUTPUT1	OUTPUT2	OUTPUT3	OUTPUT4	OUTPUT5	OUTPUT6	OUTPUT7	OUTPUT8	
RSENSE	Off	Off	Off	Off	Off	Off	Off	Off	
Mask	Off	Off	Off	Off	Off	Off	Off	Off	
HPD	Low	Low	Low	Low	Low	Low	Low	Low	
HDCP	Inactive	Inactive	Inactive	Inactive	Inactive	Inactive	Inactive	Inactive	

Output				
	1	2	3	4
Name	OUTPUT1	OUTPUT2	OUTPUT3	OUTPUT4
RSENSE	Off	Off	Off	Off
Mask	Off	Off	Off	Off
HPD	Low	Low	Low	Low
HDCP	Inactive	Inactive	Inactive	Inactive

Output

Displays the state of each output for each of the following: Output name, RSENSE, Mask, HPD (Hot-Plug Detect), and HDCP.

Input					
	1	2	3	4	5
Name	INPUT1	INPUT2	INPUT3	INPUT4	INPUT5
Color Depth	-	-	-	-	-
Color Space	-	-	-	-	-
HDCP	No	No	No	No	No
3D	No	No	No	No	No
Active Signal	No	No	No	No	No
Vertical Resolution	-	-	-	-	-
Horizontal Resolution	-	-	-	-	-
Progressive / Interlaced	-	-	-	-	-

Input

Displays the following status of each input: Input name, Color Depth, Color Space, HDCP, 3D, Active Signal, Vertical Resolution, Horizontal Resolution, Progressive / Interlaced, and Refresh Rate.

Main ► Display Info

Choose EDID

Select the EDID from the drop-down list. The selected EDID will be copied from the selected EDID Bank or Output to the desired input(s) and used by the source.

Options:

Default EDID, Bank 1 ... Bank 8, Output 1 ... Output 8

Choose EDID Default EDID ▼

Feature

24Hz Frame Rate	TRUE
Max Resolution	1080P@60Hz
Max Color Depth	12 bit
3D Capable	FALSE
Mode (DVI/HDMI)	HDMI
Max Audio Channels	2 Ch
Monitor Name	HDMI-DA

Audio Formats

LPCM	TRUE
DTS-HD	FALSE
DTS Digital Surround	FALSE
Dolby Digital (AC3)	FALSE
Dolby TrueHD	FALSE

Feature / Audio Formats

Displays the capabilities of the display (or sink device), based on the selected EDID.

I/O Setup ► Preset Names

Gefen 8x8 Crosspoint Matrix for HDMI Log Out

Main I/O Setup Manage EDID Configuration

Preset Names I/O Names HPO Control FST HDCP

Edit Preset Names

Preset #	Name
1	Preset_1
2	Preset_2
3	Preset_3
4	Preset_4
5	Preset_5
6	Preset_6
7	Preset_7
8	Preset_8

Save Changes Cancel

Edit Preset Names

Preset #	Name
1	Preset_1
2	Preset_2
3	Preset_3
4	Preset_4
5	Preset_5
6	Preset_6
7	Preset_7
8	Preset_8

Save Changes Cancel

Name
Type the desired name of the Preset in this field.
Click the **Save Changes** button to save the Preset Name.
Click the **Cancel** button to restore the previous name.

Save Changes
Saves the current changes.

Cancel
Restores the previous names for each Preset, if a change was made.

I/O Setup ► I/O Names

Gefen 8x8 Crosspoint Matrix for HDMI Log Out

Main I/O Setup Manage EDD Configuration

Preset Names I/O Names HPD Control FST HDCP

Edit Output & Input Names

Output	Name	Input #	Name
1	OUTPUT1	1	INPUT1
2	OUTPUT2	2	INPUT2
3	OUTPUT3	3	INPUT3
4	OUTPUT4	4	INPUT4
5	OUTPUT5	5	INPUT5
6	OUTPUT6	6	INPUT6
7	OUTPUT7	7	INPUT7

Edit Output & Input Names			
Output	Name	Input #	Name
1	OUTPUT1	1	INPUT1
2	OUTPUT2	2	INPUT2
3	OUTPUT3	3	INPUT3
4	OUTPUT4	4	INPUT4
5	OUTPUT5	5	INPUT5
6	OUTPUT6	6	INPUT6
7	OUTPUT7	7	INPUT7
8	OUTPUT8	8	INPUT8

Save Changes **Cancel**

Name

Type the desired name of each Output or Input in these fields. Click the **Save Changes** button or click the **Cancel** button to restore the previous name.

Save Changes

Saves the current changes.

Cancel

Cancels the current naming operation.

I/O Setup ► HPD Control

Gefen 8x8 Crosspoint Matrix for HDMI Log Out

Main I/O Setup Manage EDD Configuration

Preset Names I/O Names HPD Control FST HDCP

HPD Control

Input #	Name	
1	INPUT1	Pulse
2	INPUT2	Pulse
3	INPUT3	Pulse
4	INPUT4	Pulse
5	INPUT5	Pulse
6	INPUT6	Pulse
7	INPUT7	Pulse
8	INPUT8	Pulse

HPD Control		
Input #	Name	
1	INPUT1	Pulse
2	INPUT2	Pulse
3	INPUT3	Pulse
4	INPUT4	Pulse
5	INPUT5	Pulse
6	INPUT6	Pulse
7	INPUT7	Pulse
8	INPUT8	Pulse

Pulse

Click the Pulse button to cycle the HPD line on the desired input. This is the equivalent of physically disconnecting and reconnecting the HDMI cable between the source device and the matrix.

I/O Setup ► FST

Fast Switching Technology

FST	Input #	Name
☒	1	INPUT1
☒	2	INPUT2
☒	3	INPUT3
☒	4	INPUT4
☒	5	INPUT5
☒	6	INPUT6
☒	7	INPUT7
☒	8	INPUT8

Check All Set Cancel

Clear All

Check All

Places a check mark in each box under the FST column.

Clear All

Clears all check marks from the FST column.

Set

Click this button to enable FST on the selected input(s). The Web GUI will display a prompt to verify the selected operation.

Cancel

Restores the previous FST state for each input, if a change was made.

FST

Click to select the desired input(s). Selecting the input does *not* automatically enable the FST feature. Use the **Set** button to enable FST on the selected input.

I/O Setup ► HDCP



NOTE: Some computers will enable HDCP if an HDCP-compliant display is detected. Use the Disable feature to force the computer to ignore detection of an HDCP-compliant display. Using the Disable setting does *not* decrypt HDCP content.

Gefen 8x8 Crosspoint Matrix for HDM Log Out

Main I/O Setup Manage EDID Configuration HDCP

Present Names I/O Names HPD Control FST HDCP

Disable	Input #	Name
☐	1	INPUT1
☐	2	INPUT2
☐	3	INPUT3
☐	4	INPUT4
☐	5	INPUT5
☐	6	INPUT6
☐	7	INPUT7
☐	8	INPUT8

Check All Set

HDCP Pass Through		
Disable	Input #	Name
☐	1	INPUT1
☐	2	INPUT2
☐	3	INPUT3
☐	4	INPUT4

Check All Set Cancel

Clear All

Check All

Places a check mark in each box under the HDCP column.

Clear All

Clears all check marks from the HDCP column.

Set

Click this button to disable HDCP on the selected input(s).

Cancel

Restores the previous HDCP state for each input, if a change was made.

Disable

Click to select the desired input(s) and use the **Set** button to force the computer to ignore detection of an HDCP-compliant display.

Manage EDID ► Assign

Lock EDID

Secures the Local EDID and disables the automatic loading after power-up. See the [#lock_edid](#) command for more information.

If the Lock EDID button is clicked (enabled), the “EDID locked on power cycle” message will be displayed in red. The local EDID information will now be locked once the matrix is rebooted. Click the Unlock EDID button to disable the Lock EDID feature.

The diagram illustrates the EDID management process. It shows a 'Lock EDID' button and an 'Unlock EDID' button. A red banner indicates 'EDID locked on power cycle.' when the lock is enabled. Below, a screenshot of the Gefen web interface shows the 'Assign' tab for the '8x8 Crosspoint Matrix for HDMI'. The interface includes a 'Copy EDID From' dropdown menu set to 'Default EDID'. Two tables are present for selecting EDID sources and destinations.

Copy To	EDID Mode	Input #	Name	EDID Source	EDID Name
☐	Custom	1	INPUT1	OUTPUT1	
☐	Custom	2	INPUT2	OUTPUT1	
☐	Custom	3	INPUT3	OUTPUT1	
☐	Local/Global	4	INPUT4	Dynamic EDID	
☐	Custom	5	INPUT5	OUTPUT1	
☐	Custom	6	INPUT6	OUTPUT1	
☐	Custom	7	INPUT7	OUTPUT1	
☐	Custom	8	INPUT8	OUTPUT1	

Copy To	Input #	Name	EDID Name
☐	1	Bank 1	N/A
☐	2	Bank 2	N/A
☐	3	Bank 3	N/A
☐	4	Bank 4	N/A
☐	5	Bank 5	N/A
☐	6	Bank 6	N/A
☐	7	Bank 7	N/A
☐	8	Bank 8	N/A

Copy EDID From: Default EDID ▼

Copy EDID From

Select the EDID from the drop-down list. The EDID will be copied from the selected destination to the desired input or EDID bank.

Options:

Default EDID, Bank 1 ... Bank 8, Output 1 ... Output 8

(continued on next page)

Clears all check marks from the *Copy To* column.

Gefen 8x8 Crosspoint Matrix for HDMI Log Out

Main | IO Setup | **Manage EDID** | Configuration

Assign | Bank Names | Upload/Download

Copy EDID From: Default EDID

Copy EDID To: -Please select from the inputs/banks below

Inputs					
Copy To	EDID Modes	Input #	Name	EDID Source	EDID Name
☐	Custom	1	INPUT1	OUTPUT1	
☐	Custom	2	INPUT2	OUTPUT1	
☐	Custom	3	INPUT3	OUTPUT1	
☐	Link/Output	4	INPUT4	Dynamic EDID	
☐	Custom	5	INPUT5	OUTPUT1	
☐	Custom	6	INPUT6	OUTPUT1	
☐	Custom	7	INPUT7	OUTPUT1	
☐	Custom	8	INPUT8	OUTPUT1	

Banks			
Copy To	Input #	Name	EDID Name
☐	1	Bank 1	N/A
☐	2	Bank 2	N/A
☐	3	Bank 3	N/A
☐	4	Bank 4	N/A

Banks			
Copy To	Input #	Name	EDID Name
☐	1	Bank 1	N/A
☐	2	Bank 2	N/A
☐	3	Bank 3	N/A
☐	4	Bank 4	N/A
☐	5	Bank 5	N/A
☐	6	Bank 6	N/A
☐	7	Bank 7	N/A
☐	8	Bank 8	N/A

Check All

Places a check mark in each box under the *Copy To* column.

Clear All

Clears all check marks from the *Copy To* column.

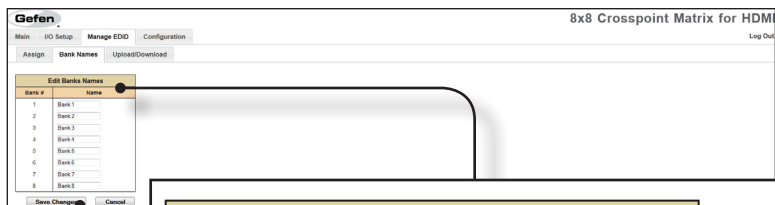
Copy

Click this button to copy the specified EDID to the selected inputs / banks.

Cancel

Restores the previous EDID state for each input, if a change was made.

Manage EDID ► Bank Names



Edit Banks Names	
Bank #	Name
1	Bank 1
2	Bank 2
3	Bank 3
4	Bank 4
5	Bank 5
6	Bank 6
7	Bank 7
8	Bank 8

Bank #

Indicates the EDID bank number.

Name

Type the desired name of the EDID bank in this field.

Click the **Save Changes** button to save the bank name.

Click the **Cancel** button to restore the previous name.

Save Changes	Cancel
---------------------	---------------

Save Changes

Saves the current name change to the EDID bank(s).

Cancel

Restores the previous names for each EDID bank, if a change was made.

Manage EDID ► Upload / Download

Upload

Click this button to upload the EDID to the specified bank.

Select Bank Location

Click this drop-down list to select the bank to where the EDID will be uploaded.

Options:
Bank 1 ... Bank 8

Browse...

Click this button to select the EDID file to be uploaded.

Upload EDID

Select EDID File to Upload:

Select Bank Location:

1 - Bank 1

Download EDID

Select EDID File to Download:

Default EDID

Download EDID

Click the drop-down box to select the EDID that is to be saved to a file. The EDID file will be saved in binary format (.bin). Click the *Download* button to save the selected EDID to a file.

Options:

Bank 1 ... Bank 8, Output 1 ... Output 8,
Input 1 ... Input 8

Configuration ► Change IP Settings

Change IP Settings

MAC Address:	00:1a:07:11:01:06
IP Address:	192.168.1.249
Subnet:	255.255.255.0
Gateway:	192.168.1.1
Port:	80
TCP/Telnet Terminal Port:	23
UDP Port:	50007

Save Settings **Set Defaults**

Change IP Settings

Assigns the IP address, subnet, gateway, HTTP listening port, Telnet port, and UDP port. The MAC address cannot be changed.

Save Settings

Saves the current settings for the Change IP Settings. After clicking this button, the Web interface will display a dialog indicating that the matrix must be rebooted for changes to take effect.

Set Defaults

Click this button to restore the factory-default IP settings. After clicking this button, the Web interface will display a dialog indicating that the matrix must be rebooted for changes to take effect.

Configuration ► Telnet Login Settings

Change IP Settings

MAC Address: 05-1a-07-11-01-06
 IP Address: 192.168.1.249
 Subnet: 255.255.255.0
 Gateway: 192.168.1.1
 Port: 80
 TFTP/Telnet Terminal Port: 23
 UDP Port: 5007

Telnet Login Settings

Old Password:
 New Password:
 Confirm New Password:
 Force Password on Connect: ☐
 Show Login Message on Connect: ☒

UDP Connection Settings

Remote UDP IP Address: 192.168.1.80
 Remote UDP Port: 5008

Telnet Login Settings

Old Password:
 New Password:
 Confirm New Password:
 Force Password on Connect: ☐
 Show Login Message on Connect: ☒

Save Settings

Old Password

Type the current (old) password in this field. The factory-default password is Admin.

New Password

Type the new password in this field.

Force Password on Connect

Click this check box to have the matrix prompt for a password each time a Telnet session is started.

Show Login Message on Connect

Click this check box to have the matrix display the Telnet welcome message each time a Telnet session is started. The welcome message appears as: "Welcome to EXT-HDFST-848 TELNET"

Save Settings

Saves the current changes to the Telnet Login Settings.

Configuration ► UDP Connection Settings

The screenshot shows the 'Configuration' page of the Gefen web interface. The 'UDP Connection Settings' section is highlighted with a callout box. The settings are as follows:

UDP Connection Settings	
Remote UDP IP Address:	192.168.1.80
Remote UDP Port:	50008
Enable UDP Access:	☐

A 'Save Settings' button is located at the bottom right of the callout box.

Remote UDP IP Address

Type the remote UDP IP address in this text box.

Remote UDP Port

Enter the remote UDP port in this text box.

Enable UDP Access

Check this box to enable UDP access. If this box is unchecked, the UDP access will be unavailable.

Configuration ► Web Login Settings

Web Login Settings

Username:

Operator

Old Password:

New Password:

Confirm New Password:

Save Settings

Telnet Login Settings

Old Password:

New Password:

Confirm New Password:

Force Password on Connect:

☐

Show Login Message on Connect:

☒

Save Settings

UDP Connection Settings

Remote UDP IP Address:

192.168.1.80

Remote UDP Port:

30008

Enable UDP Access:

☐

Save Settings

Web Login Settings

Username:

Operator

Old Password:

New Password:

Confirm New Password:

Save Settings

System Configuration

Download Current Configuration

Download

Restore Configuration

Choose...

Warning: All current settings will be lost

Hardware

Firmware Update (G1 ver: v3.10)

Update

Factory Reset

Reset

Reboot

Reboot

Username

Click this drop-down list to select the username to be changed.

Old Password

Type the current (old) password in this field. The factory-default password is Admin.

New Password

Type the new password in this field.

Confirm Password

Re-type the new password in this field.

Save Settings

Saves the current changes to the Web Login Settings.

Configuration ► System Configuration



NOTE: As of this writing, the firmware update procedure is not functional from within the Web interface. This feature will be available in a future release of the product. The firmware update procedure must be performed using RS-232. See [page 102](#).

System Configuration

Download Current Configuration

Download

Restore Configuration

Browse...

Warning: All current settings will be lost

Restore

Firmware Update (UI ver: v3.1G)

Browse...

Update

Factory Reset

Reset

Reboot

Reboot

Save Settings

Web Login Settings

Username: Operator

Old Password:

New Password:

Confirm New Password:

Save Settings

System Configuration

Download Current Configuration

Download

Restore Configuration

Browse...

Warning: All current settings will be lost

Restore

Firmware Update (UI ver: v3.1G)

Browse...

Update

Factory Reset

Reset

Reboot

Reboot

Download Current Configuration

Click this button to download the current configuration to a file.

System Configuration

Download Current Configuration

Download

Restore Configuration

Browse...

Warning: All current settings will be lost

Restore

Firmware Update (UI ver: v3.1G)

Browse...

Update

Factory Reset

Reset

Reboot

Reboot

Browse

Click this button to select the firmware file to be uploaded. See [page 102](#) for details on updating the firmware.

Browse

Click this button to select the saved configuration file to be loaded into memory.

Restore

Uploads the selected configuration file to the matrix.

Update

Updates the matrix with the selected firmware file.

Reset

Click this button to set the matrix to factory-default settings. The IP settings are preserved.

Reboot

Click this button to reboot the matrix.



Crosspoint Matrix for HDMI

04 Appendix

Firmware Upgrade Procedure.....	102
Specifications	104

Firmware Upgrade Procedure



IMPORTANT: *DO NOT* power-off or disconnect the AC power cord from the matrix, at any time, during the firmware upgrade process.

1. Make sure the 8x8 Matrix for HDMI is powered.
2. Connect an Ethernet cable between the matrix and the computer running the Web GUI.
3. Go to the **Configuration** tab in the Web GUI and click the Firmware Update **Browse...** button under the **System Configuration** section (see opposite page).
4. Select the firmware file (e.g. EXT-HDFST-848CPN.bin) and click the **Update** button.
5. The matrix will prompt you to verify that you want to overwrite the current firmware. Click the **OK** button on the Web GUI dialog to begin uploading the firmware file.
6. The LCD display on the front panel will indicate the progress:

```
--FILE UPLOADING--
35%
```

If the matrix is connected to a terminal program, using RS-232 (or Telnet), a detailed version of the upgrade progress can be observed:

```
START UPLOADING FROM ETHERNET.
35%
Update by ethernet
```

7. Once the firmware file has been uploaded, the matrix will verify the firmware content.

```
content check: PASS
    Product Code = 6
    HW Version = 0
    Release Day = 22
    Release Month = 2
    Release Year = 13
```

8. After the firmware file integrity has been verified, the matrix will begin the upgrade procedure.

```
Master Update.
Master update done.
Update Slave 1.
Update Slave 2.
System update done.
```

9. After the matrix has completed successfully, the matrix will reboot and the following will be displayed within the terminal program (if used):

```
EXT-HDFST-848CPN v3.1G  
A1B4C4D4E5F6G7H8
```

```
BANK NAME INIT....  
PRESET NAME INIT....
```

```
EXT-HDFST-848CPN v3.1G  
A1B4C4D4E5F6G7H8
```

10. Once the routing status screen is displayed, the matrix will be ready to use.



```
OUT: ABCDEFGH  
IN: 14445678
```

Specifications

Supported Formats

Resolution (max.)	• 1080p Full HD
-------------------	-----------------

Electrical

Maximum Pixel Clock	• 225 MHz
Power Indicator	• LED, blue = ON; red = standby mode
Lock Indicator	• LED, blue

Connectors

Video Input	• 8 x HDMI Type A 19-pin, female, locking
Video Output	• 8 x HDMI Type A 19-pin, female, locking
Serial (RS-232)	• 1 x DB-9, female
USB	• 1 x Mini-B, female
Ethernet	• 1 x RJ-45, female
IR Extender	• 1 x 3.5mm mini-stereo jack

Operational

Power Input	• 1 x 24V DC, locking
Power Consumption	• 80W (max.)
Operating Temperature	• +32 to +104° (0 to +40° C)

Physical

Dimensions (W x H x D)	• 17.25" x 3.5" x 10" (440mm x 89mm x 254mm)
Unit Weight	• 13.6 lbs (6.2 kg)



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www.gefen.com support@gefen.com



This product uses UL or CE listed power supplies.